1. A method of removing silicon dioxide upon an etch stop layer, the method comprising:

providing a silicon dioxide dielectric layer upon an etch stop layer;

providing a gaseous etchant including a hydrofluorocarbon etch gas and including a fluorocarbon selectivity compound;

exposing the silicon dioxide dielectric layer to the gaseous etchant.

2. A method as defined in claim 1, wherein the selectivity compound is selected from the group consisting of CF_4, C_2F_6, C_4F_8, C_5F_6, C_5F_8, and combinations thereof.

3. A method as defined in claim 1, wherein the etch stop layer is refractory metal nitride.

4. A method as defined in claim 1, wherein the hydrofluorocarbon is provided in a first quantity, the fluorocarbon is provided in a second quantity, and the first quantity is at least twice the second quantity.

5. A method as defined in claim 4, wherein the refractory metal nitride is selected from the group consisting of cobalt nitride, titanium nitride, tungsten nitride, and hafnium nitride.

6. A method as defined in claim 1, wherein the etch stop layer is silicon nitride.

7. A method as defined in claim 1, wherein the etch stop layer is silicon dioxide that is doped differently from the silicon dioxide dielectric layer.

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8. A method according to claim 1, wherein exposing the silicon dioxide dielectric layer is performed in an etch chamber having a roof composed of silicon and having a temperature in a range from about 100° C to about 200° C.

9. A method according to claim 1, wherein etching the silicon dioxide dielectric layer in the gaseous etchant is carried out until the etch stop layer is exposed.

10. A method according to claim 1, wherein the selectivity compound is supplied in a range from about less than one part to about 15 parts, and the hydrofluorocarbon is CHF_3 supplied in a range from about 30 parts to about 50 parts.

11. A method according to claim 1, wherein the selectivity compound is supplied in about 15 parts and the hydrofluorocarbon is CHF_3 supplied in about 44 parts to about 45 parts.

12. A method according to claim 1, wherein the selectivity compound is supplied in a range from about 0.5 parts to about 4 parts and the hydrofluorocarbon is CHF_3 supplied in about 44 parts to about 45 parts.

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13. A method of etching a self-aligned contact comprising:

providing a semiconductive substrate having a silicon nitride layer thereon and a silicon dioxide dielectric layer on the silicon nitride layer;

placing the semiconductive substrate in an etch chamber;

etching into the silicon dioxide dielectric layer to form a depression, using gaseous CHF_3 and a selectivity compound selected from the group consisting of CF_4, C_2F_6, C_4F_8, C_5F_6, C_5F_8, and combinations thereof;

etching the depression to the semiconductive substrate; and

stopping said etching after the etch exposes the silicon nitride layer.

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14. A method of removing silicon dioxide dielectric upon an etch stop layer that is situated upon a semiconductive substrate positioned within an etch chamber, the method comprising:

etching the silicon dioxide dielectric to a first depth with a first etch recipe including a hydrofluorocarbon, the first etch recipe having a first selectivity to the etch stop layer;

etching the silicon dioxide dielectric to a second depth with a second etch recipe including the hydrofluorocarbon and a selectivity compound consisting of a fluorocarbon, the second etch recipe having a second selectivity to the etch stop layer, wherein the first selectivity is greater than the second selectivity; and

stopping the second etching upon the etch stop layer.

15. A method as defined in claim 14, wherein the selectivity compound is selected from the group consisting of CF_4, C_2F_6, C_4F_8, C_5F_6, C_5F_8, and combinations thereof.

16. A method as defined in claim 14, wherein the etch stop layer is a nitride compound.

17. A method as defined in claim 14, wherein the etch stop layer is refractory metal nitride.

18. A method as defined in claim 17, wherein the refractory metal nitride is selected from the group consisting of cobalt nitride, titanium nitride, tungsten nitride, and hafnium nitride.

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19. A method as defined in claim 16, wherein the nitride compound is silicon nitride.

20. A method as defined in claim 14, wherein the etch stop layer is silicon dioxide that is doped differently from the silicon dioxide dielectric.

21. A method as defined in claim 14, wherein the etch chamber has a roof composed of silicon roof that is at temperature in a range from about 100° C to about 200° C. while etching the silicon dioxide to the first and second depths.

22. A method as defined in claim 14, wherein the first etch recipe includes CH_2F_2, CH_3F, or mixtures thereof.

23. A method as defined in claim 14, wherein the selectivity compound is supplied in a range from about less than one part to about 15 parts, and the hydrofluorocarbon is supplied in a range from about 30 parts to about 50 parts.

24. A method as defined in claim 14, wherein the selectivity compound is supplied in about 15 parts and the hydrofluorocarbon is supplied in about 44 parts to about 45 parts.

25. A method as defined in claim 14, wherein the selectivity compound is supplied in a range from about 0.5 to about 4 parts and the hydrofluorocarbon is supplied in about 44 parts to about 45 parts.

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26. A method as defined in claim 14, wherein:

the etch stop layer is a spacer on each gate stack in a pair of adjacent, spaced apart gate stacks situated over the semiconductive substrate;

the silicon dioxide dielectric is formed over and between the gate stacks;

etching the silicon dioxide dielectric to the first and second depths forms a contact hole between the pair gate stacks without etching the spacer.

27. A method as defined in claim 26, wherein the contact hole is self-aligned contact hole with respect to the pair of gate stacks.

28. A method as defined in claim 14, wherein the contact hole has an aspect ratio of at least 5:1.

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29. An etching method comprising:

providing an etch chamber and a semiconductive substrate having thereon a bulk dielectric upon an underlying layer that is a compositionally dissimilar dielectric;

etching the bulk dielectric with a first etch recipe including hydrofluorocarbon and a selectivity gas consisting of fluorocarbon in a first proportion; and

etching the bulk dielectric with a second etch recipe including hydrofluorocarbon and the selectivity gas in a second proportion that is greater than the first proportion, wherein etch selectivity to the underlying layer is greater for the second etch recipe than etch selectivity for the first etch recipe.

30. A method as defined in claim 29, wherein the fluorocarbon is supplied in time and concentration pulsed intervals.

31. A method as defined in claim 29, wherein the bulk dielectric layer is selected from the group consisting of doped and undoped silicon dioxide.

32. A method as defined in claim 29, wherein the underlying layer is selected from the group consisting of:

a nitride compound, a refractory metal nitride, cobalt nitride, titanium nitride, tungsten nitride, and hafnium nitride, silicon nitride, undoped oxide, and an oxide that is compositionally dissimilar to the bulk dielectric.

33. A method as defined in claim 29, wherein the selectivity gas is selected from the group consisting of CF_4, C_2F_6, C_4F_8, C_5F_6, C_5F_8, and combinations thereof.

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34. A method as defined in claim 29, wherein the hydrofluorocarbon is CHF_3 supplied in about 30 parts to about 50 parts and the selectivity gas of the second etch recipe is supplied in a range from less than about 1 parts to about 15 parts.

35. A method as defined in claim 29, wherein:

the bulk dielectric is composed of silicon dioxide; and

the underlying layer is composed of silicon nitride.

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36. In an etch chamber having a roof composed of silicon, a semiconductive substrate support for supporting a semiconductive substrate having a bulk dielectric disposed upon an etch stop layer, and having a silicon ring surrounding the semiconductive substrate support, an etching method comprising:

maintaining the temperature of:

the roof of the etch chamber in a range from about 135° C to about 200° C;

the semiconductive substrate support in a range from about -30° C to about 80° C;

the silicon ring in a range from about 180° C to about 250° C;

etching a recess having an aspect ratio of at least 5:1 in the bulk dielectric using a gaseous etchant including CHF_3 and a selectivity compound consisting of carbon and fluorine;

etching the recess to the semiconductive substrate; and

stopping etching the recess after the etch stop layer has been exposed.

37. A method as defined in claim 36, wherein the etch stop layer is refractory metal nitride.

38. A method as defined in claim 37, wherein the refractory metal nitride is selected from the group consisting of cobalt nitride, titanium nitride, tungsten nitride, and hafnium nitride.

39. A method as defined in claim 36, wherein the etch stop layer is composed of a layer selected from silicon nitride, TEOS, undoped oxide, and an oxide that is compositionally different from the bulk dielectric.

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40. A method according to claim 36, wherein the bulk dielectric is composed of silicon dioxide and the etch stop layer is composed of silicon nitride.

41. A method as defined in claim 36, wherein:

the etch stop layer is a spacer on each gate stack in a pair of separated gate stacks situated over the semiconductive substrate;

the bulk dielectric is formed over and between the gate stacks;

said etching forms a contact hole between the pair gate stacks without etching the spacer.

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42. A method of determining a specific etch recipe for etching silicon dioxide with predetermined selectivity to an etch stop layer underlying the silicon dioxide, the method comprising:

etching silicon dioxide with a gaseous etchant including a hydrofluorocarbon and a selectivity gas consisting of carbon and fluorine to obtain a selectivity to the etch stop layer;

repeating said etching with different amounts of said selectivity gas consisting of carbon and fluorine to correspondingly obtain different selectivities to said etch stop layer;

selecting an amount of said different amounts of said selectivity compound corresponding to a desired etch selectivity to said etch stop layer; and

etching silicon dioxide with a gaseous etchant including the hydrofluorocarbon and said selected amount of said selectivity gas to obtain said desired selectivity to the etch stop layer.

43. A method as defined in claim 42, wherein the selectivity gas is selected from the group consisting of CF_4, C_2F_6, C_4F_8, C_5F_6, C_5F_8, and combinations thereof.

44. A method as defined in claim 42, wherein the etch stop layer is refractory metal nitride.

45. A method as defined in claim 44, wherein the refractory metal nitride is selected from the group consisting of cobalt nitride, titanium nitride, tungsten nitride, and hafnium nitride.

46. A method as defined in claim 42, wherein the etch stop layer is silicon nitride.

47. A method as defined in claim 46, wherein:

the nitride compound is a spacer on each gate stack in a pair of separated gate stacks situated over the semiconductor substrate;

the silicon dioxide is formed over and between the gate stacks;

each of said etching steps forms a contact hole between the pair gate stacks without etching the spacer.

48. A method as defined in claim 42, wherein the etch stop layer is an oxide that is compositionally different from the silicon dioxide.

49. A method as defined in claim 42, wherein the contact hole has an aspect ratio of greater than about 5:1.

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